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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/594,529

09/28/2006

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EXAMINER

DEGHAN, QUEENIE S

ART UNIT

PAPER NUMBER

1791

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/594,529	<b>Applicant(s)</b> OTOSAKA, TETSUYA	
	<b>Examiner</b> QUEENIE DEGHAN	<b>Art Unit</b> 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 September 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/28/06, 6/18/09</u>  | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-2, 4-5, 7-9, and 13-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakamura et al. (2003/0015004). Nakamura discloses an apparatus that is vertical for manufacturing porous glass base material comprising a starting member (1) placed vertically, a burner (2) capable of depositing glass particles, and a plurality of gas inlets (9 & 13) provided in one or more lateral walls including the burner, in the upper portions of the wall (s) and along a ceiling of the process chamber (fig 1, 2, 6 & 8, [0006], [0027], [0031]-[0032], [0034]-[0035]).

3. Regarding claim 2, the gas inlets include gas inlet (9) and gas inlet (13), wherein gas inlet (13) are provided in lateral walls that oppose each other with a porous glass base material being position there between (figure 2).

4. Regarding claims 4, 8 and 9, Nakamura discloses an exhaust outlet (10, 11) in a lateral wall opposing the lateral wall with the burner (figure 2, [0027]).

5. Regarding claim 5, Nakamura discloses a width of the lateral wall in which the exhaust outlet is provided is smaller than a width of a lateral wall in which a gas inlet is provided (figure 2, 3, 4a, 4b and 7, [0030]).

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6. Regarding claims 7 and 13-17, the ceiling and lateral walls of the process chamber along which a gas supplied from the gas inlets flows are formed by flat surfaces (all figures, [0028], [0030]).

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. Claims 3, 9, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura et al. (2003/0015004) in view of Kuwabara et al. (JP 2000-109327).

Nakamura fail to disclose further slit-like gas inlets along the left and right edges of the burner wall. Kuwabara teaches of slit-like gas inlets (11a) in a process chamber along left and right edges of a lateral wall on which a burner is provided (figures 1-3). It would have been obvious to one of ordinary skill in the art at the time of the invention to have utilized the slit-like gas inlets on the left and right edges of the lateral wall with the burner in apparatus of Nakamura in order to provide for a laminar air flow along the

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inner wall of the process chamber and prevent the sticking of glass particles to the walls.

10. For claims 9 and 14, see above.

11. Claims 6, 10, 11 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura et al. (2003/0015004) and Kuwabara et al. (JP 2000-109327), as applied to claims 1, 2 and 3 above, in further view of Ishihara (2004/0134236). Nakamura fails to disclose a gas inlet provided in a lateral wall in which the exhaust outlet is provided. Ishihara teaches a process chamber comprising a burner on one lateral wall and an exhaust outlet on an opposing lateral wall, wherein a gas inlet (15) is provided in the lateral wall in which the exhaust outlet is provided (figure 1, [0022], [0025]). Furthermore, according to figure 1, Ishihara discloses the distance between the lowest part of the gas inlet is more than 30mm from the highest part of the exhaust outlet, as can be seen when compared to the respective lengths of the core rod (400mm) and traverse length of the starting rod (1000mm) ([0027]). It would have been obvious to one of ordinary skill in the art at the time of the invention to have utilized an additional gas inlet on the lateral wall on which the exhaust outlet is provided in the apparatus of Nakamura in order to provide a positive pressure in the process chamber for minimizing contamination of impurities.

12. For claim 17, see above.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to QUEENIE DEGHAN whose telephone number is

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(571)272-8209. The examiner can normally be reached on Monday through Friday 9:00am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Queenie Dehghan/  
Examiner, Art Unit 1791